

CHENBRO



User's Manual

SK32303 2-to-3 SATA / SAS HDD Storage Kit

Version B0

July / 30 / 2008

w w w . c h e n b r o . c o m

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Technical Support

CHENBRO works hard to offer our customers maximum performance from our chassis. But in case you have any problem with our product you can find supports from the following resources.

Web Support

Detail information of our products is in our website. You can find technical updates, installation guides, FAQs, Technical specifications and more. Our web address is: www.chenbro.com.

Email Support

You can also fill out the technical support form at our [Technical Support](#) page. Your technical issue inquiries will be sent directly to our support professionals.

Phone Support

You can also contact CHENBRO HQ or branch office for immediate support; their contact information is as following:

| | | |
|----------------------|---------------------|--------------------------|
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Revision History

| Date | Modifications |
|------------------|-----------------|
| July / 30 / 2008 | ● First Release |
| | |
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| | |
| | |

Safety Information

- Read the installation instructions before connecting SK32303 to the power source.
- Only trained and qualified personnel should be allowed to install, replace or service this equipment.
- Never install this product in a wet environment.
- Position system cables and power cables carefully; route system cable and the power cable and plug so that they cannot be stepped on or tripped over. Be sure that nothing rests on your system components' cables or power cable.

Conventions Used in this Manual

The following conventions are used in this manual.



Note Icon:

Provides more information on the current topic.



Important Icon:

Provides important information on the current topic that must not be overlooked.

Getting Start with the SK32303 Storage Kit

Thank you for purchasing SK32303! This section covers unpacking and identifying components.

Unpacking and Checking the Contents

The complete SK32303 package includes the following items:

| Item Description | Quantity |
|---|----------|
| SK32303 Storage Cage | 1 |
| Hot-swap 3.5" Hard Disk Drive (HDD) Tray | 3 |
| SAS / SATA-II cable | 3 |
| HDD failure / activity signal Cable | 1 |
| Screw: #6-32 (6mm) for tray and HDD assembling | 12 |
| Screw: M3 (6mm) for Storage Cage and chassis assembling | 6 |



The HDD failure / activity signal cable (26H113215-005) is available for using on HDD failure or activity LED.
Refer to the RAID card user manual for the detailed application and connection information.

Technical Specifications

| | |
|-----------------------|--|
| Occupancy | 2 x 5.25" Drive Bays |
| Capacity | 3 x SATA-I, II or SAS Hot-swap HDDs |
| Cooling Subsystem | 1 x 60mm (Thickness 25mm) Exhaust Fan |
| System Monitoring | Fan Failure LED and Alarm Overheat LED and Alarm HDD Failure LED and Alarm |
| Dimension (WxHxD) | 146 x 84.5 x 218.7 (mm) 5.75 x 3.32 x 8.61 (inch) |
| Weight (fan included) | 1.4 kg |

Compatible CHENBRO Chassis

- RM21600 / RM31300 / RM31408
RM41100 / RM41500 / RM42200
- SR105 / SR107 / SR108 / SR201 / SR209
- PC617

Introduction

The CHENBRO SK32303 can house three 3.5" HDDs in a two 5.25" bays converter (Depth of 9.5" recommended). The ability for conversion allows existing servers to perform the maximum HDD density while keeping the flexibility. In all, SK32303 is the best solution as value added feature and performance.

Functional Specification

General

- Support up to SATA-II and SAS (3.0 Gb/s)
- Compatible with 3.5" SAS, SATA-I and SATA-II HDD
- Support inrush current control for HDD Hot-swapping
- LED indicate activity and failure for each HDD
- Alternative HDD activity and failure signal source

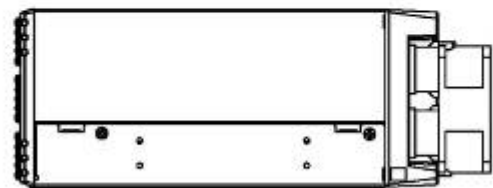
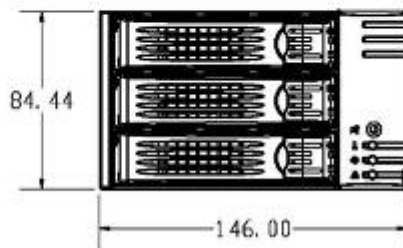
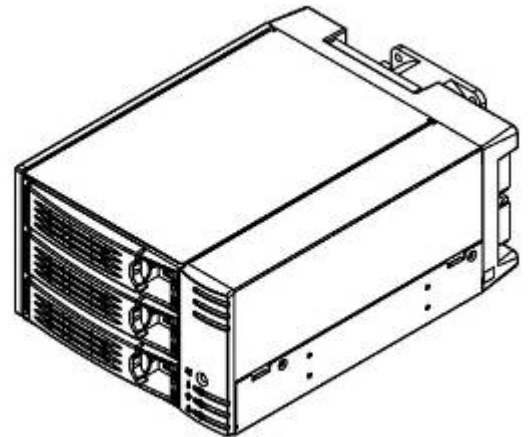
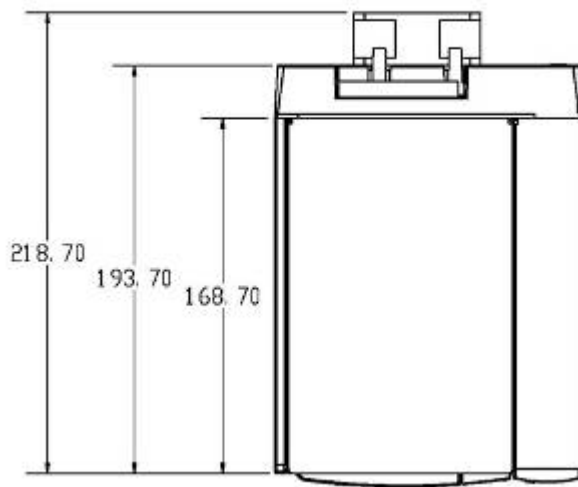
Host / Drive / Power Backplane Interface

- Direct link SATA / SAS ports
- 3 x SATA Signal + Power (7+15 pin) connectors at HDD side of backplane
- 3 x SATA interfaces (7 pin)
- 2 x DC power connectors (4-pin D-type)

Monitoring Function

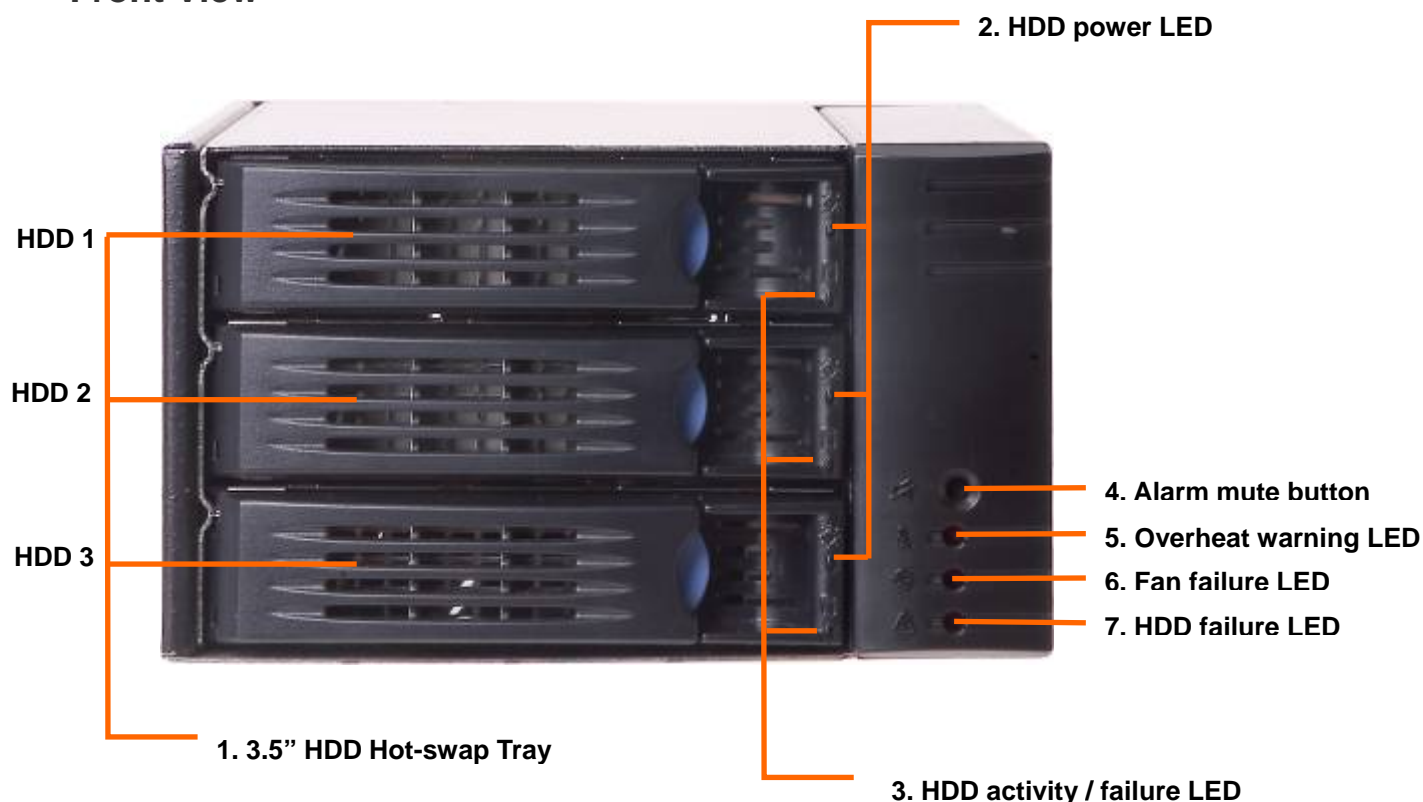
- 1 x Fan connector with speed monitoring
- 2 x temperature sensors for HDD overheating monitoring
- Alterable overheat temperature: 55 °C or 65 °C
- Support 1 x buzzer for audible alarm, 3 x LED for overheat, fan & HDD failure indicator, 1 x alarm mute button for disabling audible alarm

Mechanical Dimension



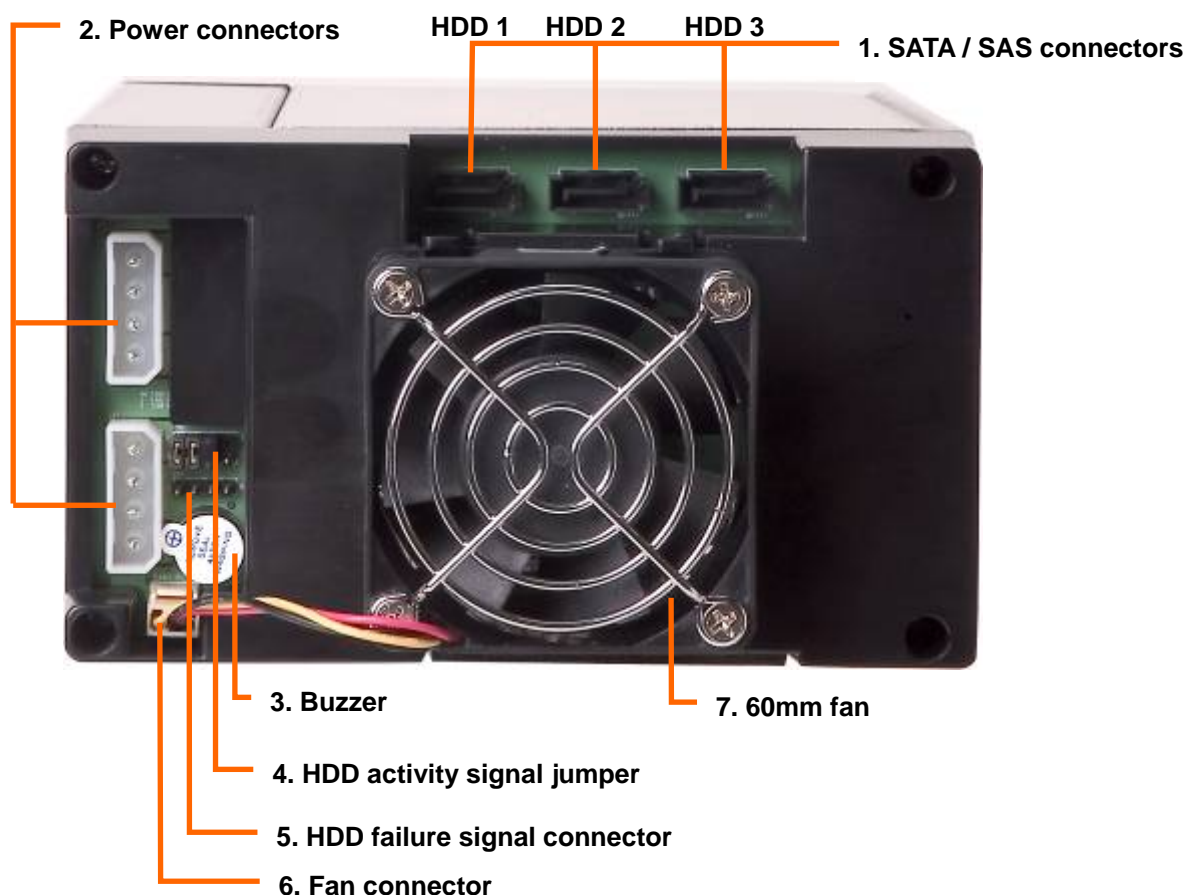
Components Description

Front View



| | Device | Function |
|---|----------------------------|---|
| 1 | 3.5" HDD Hot-swap Tray | Refer to Page 15 |
| 2 | HDD Power LED | Blue LED On - HDD Power On |
| 3 | HDD activity / failure LED | Green LED On - HDD active Red LED On - HDD failure |
| 4 | Alarm mute button | Click to stop the system failure alarm |
| 5 | Overheat Warning LED | Red LED On - Temperature overheat |
| 6 | Fan failure LED | Red LED On - Fan failure |
| 7 | HDD failure LED | Red LED On - HDD failure |

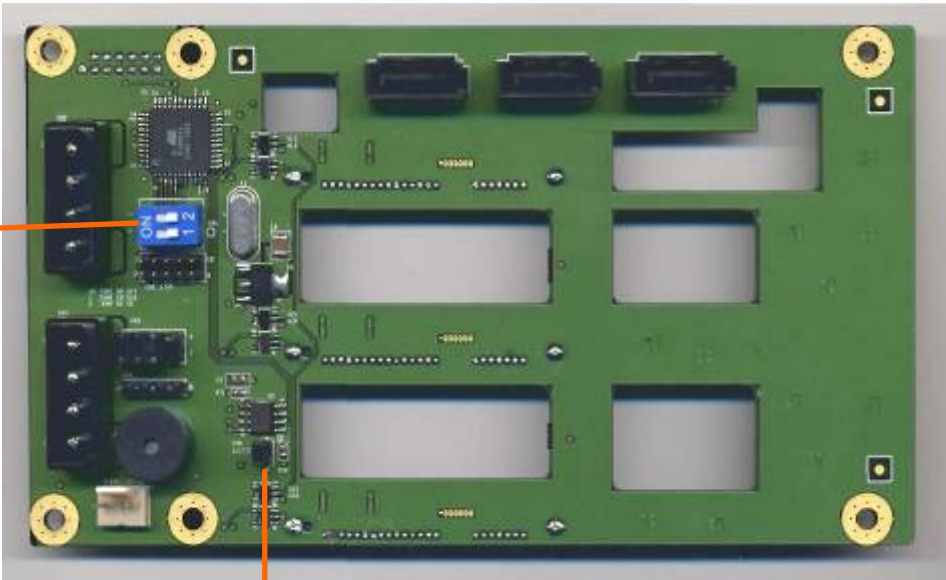
Rear View – with Cover



| | Device | Function |
|---|------------------------------|------------------------------------|
| 1 | SATA / SAS HDD Connectors | Connect to motherboard / RAID card |
| 2 | Power Connectors | Power input |
| 3 | Buzzer | Alarm for system failure |
| 4 | HDD activity signal jumper | Refer to Page 13 |
| 5 | HDD failure signal connector | Refer to Page 12 |
| 6 | Fan connector | Connect to 60mm fan |
| 7 | 60mm Fan | Air mover for SK32303 storage kit |

Rear View – Cover Removed

Fan & Temperature Switch



SATA or SAS HDD access LED
signal auto selection

| Device | Function |
|--|------------------|
| Fan & Temperature Switch | Refer to Page 14 |
| [CN8] SATA or SAS HDD access LED signal auto selection | Refer to Page 14 |

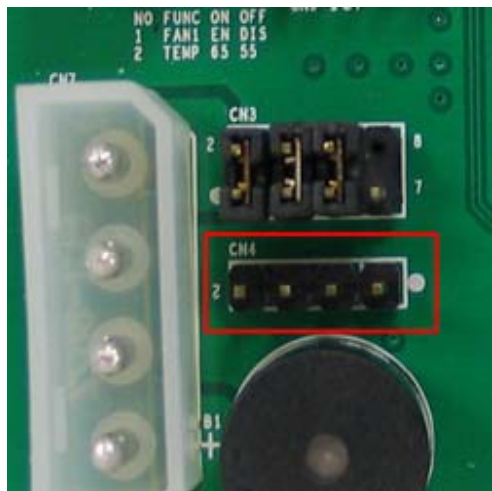


Refer to page 17 for rear cover removal.

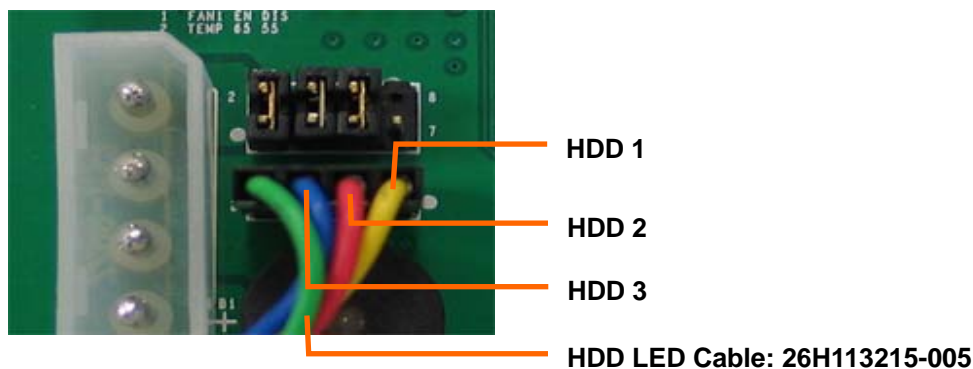
Connector & Switch Definition

HDD Failure Signal Connector

This connector is for the SATA RAID card with HDD failure signal support such as ARECA ARC-1230 & 1260. Connect the failure signal connectors on SK32303 backplane and RAID card to activate the HDD failure LED.

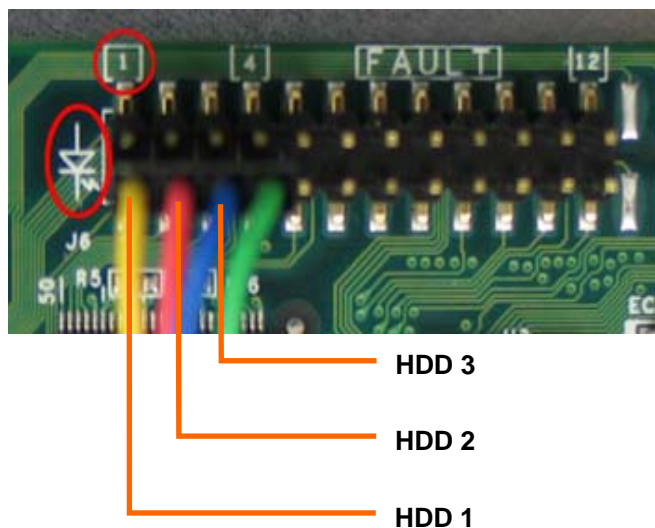


Setting for HDD Failure Signal Cable Connection (SK32303 Backplane)



Setting for HDD Failure Signal Cable Connection (RAID Card)

Connect the 4-pin HDD LED cable to the CATHODE of the HDD failure connector on RAID card. Refer to your RAID card's user manual for the detailed pin definition.



HDD Activity Signal Jumper

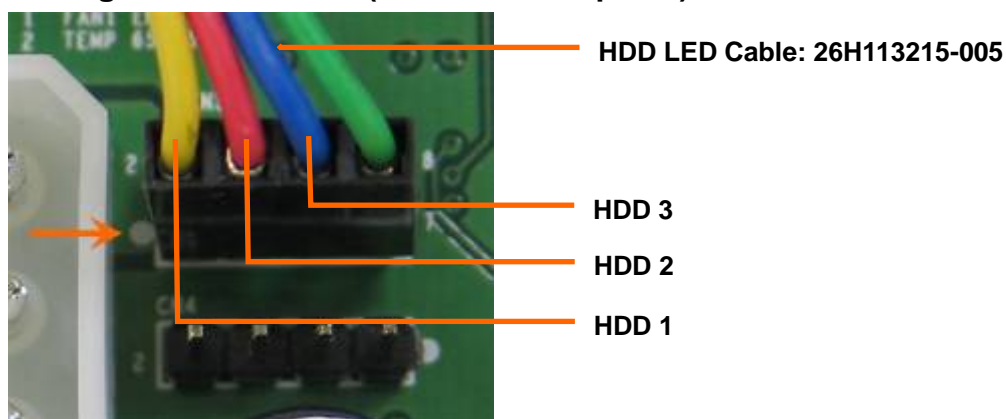
The default jumpers are installed for SATA-II (3.0 Gb/s) HDDs which support activity signal via pin-11 of the connector on HDD.

If using SATA-I (1.5 Gb/s) HDD, remove the jumper for HDD 1, 2 or 3 and connect the activity signal connectors on SK32303 backplane and RAID card to activate the HDD activity LED. The RAID card must support the HDD activity signal such as 3ware 8000 & 9000 series.

Default setting for SATA-II HDD

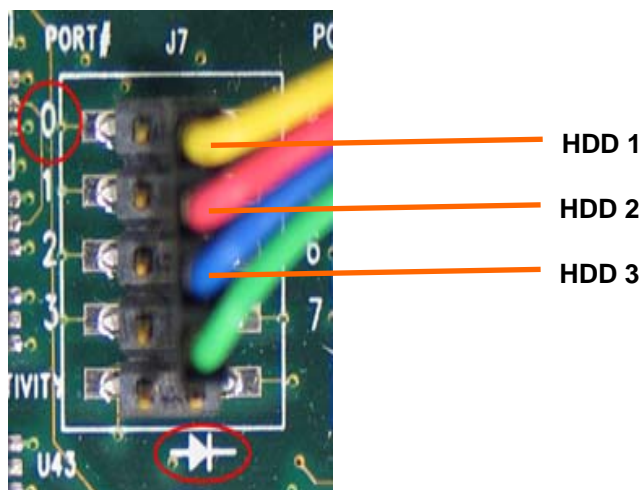


Setting for SATA-I HDD (SK32303 Backplane)



Setting for SATA-I HDD (RAID Card)

Connect the 4-pin HDD LED cable to the CATHODE of the HDD activity connector on RAID card. Refer to your RAID card's user manual for the detailed pin definition.



Fan & Temperature Switch

This switch is located behind the rear cover.

Switch 1: Enable / Disable the fan.

Switch 2: Change the threshold temperature of SK32303 storage kit



Switch 1: Fan Enable / Disable

| 1 | Fan | Remark |
|-----|---------|---------|
| ON | Enable | Default |
| OFF | Disable | |

Switch 2: Threshold Temperature Setting

| 2 | Threshold Temperature | Remark |
|-----|-----------------------|---------|
| ON | 65 °C | |
| OFF | 55 °C | Default |

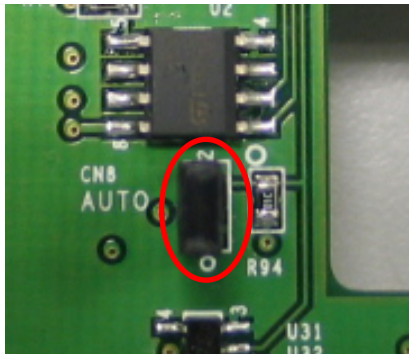


Refer to page 17 for rear cover removal.

SATA or SAS HDD access LED signal auto selection

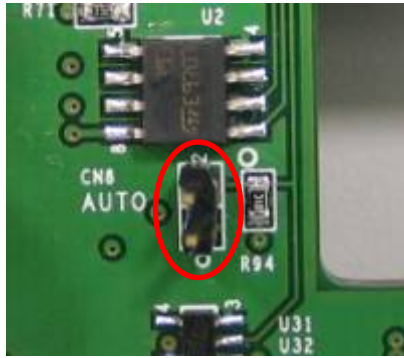
This Jumper (CN8) is located behind the rear cover.

Jumper Closed: Enable auto selection



Default setting

Jumper Opened: Disable auto selection. HDD access LED setting for SATA HDD only.



Installation Procedures

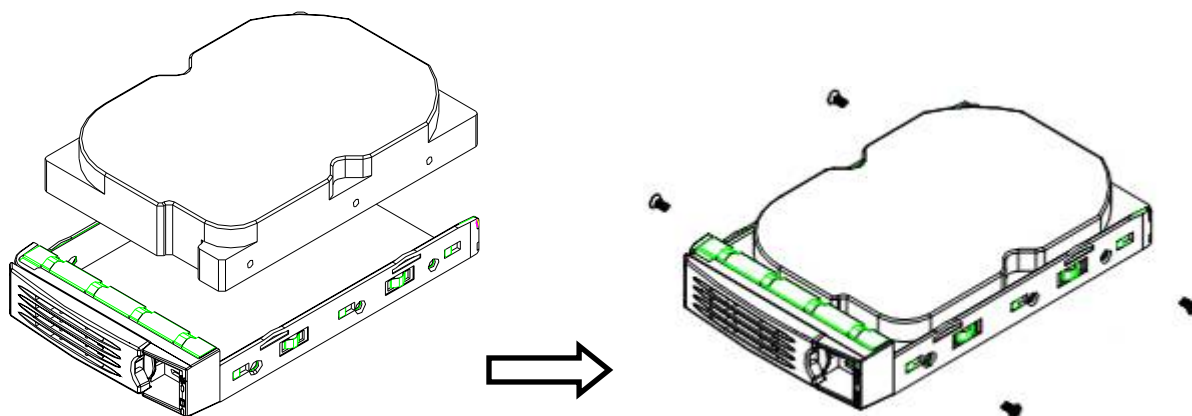
The following is the installation procedures of HDD and rear cover assembly.

Hot-swap HDD Assembly

- a. Push the blue latch of HDD tray and pull it out from the cage



- b. Attach HDD with six screws per tray



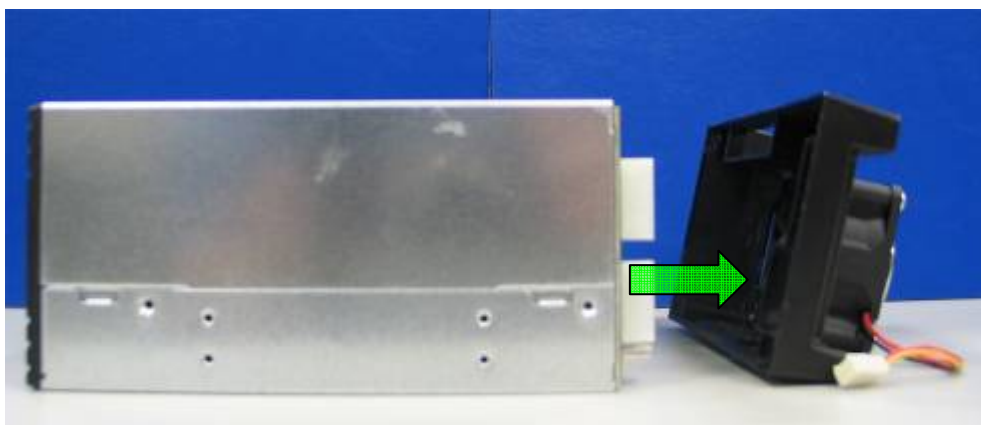
- c. Insert HDD tray to the cage

Remove Rear Cover

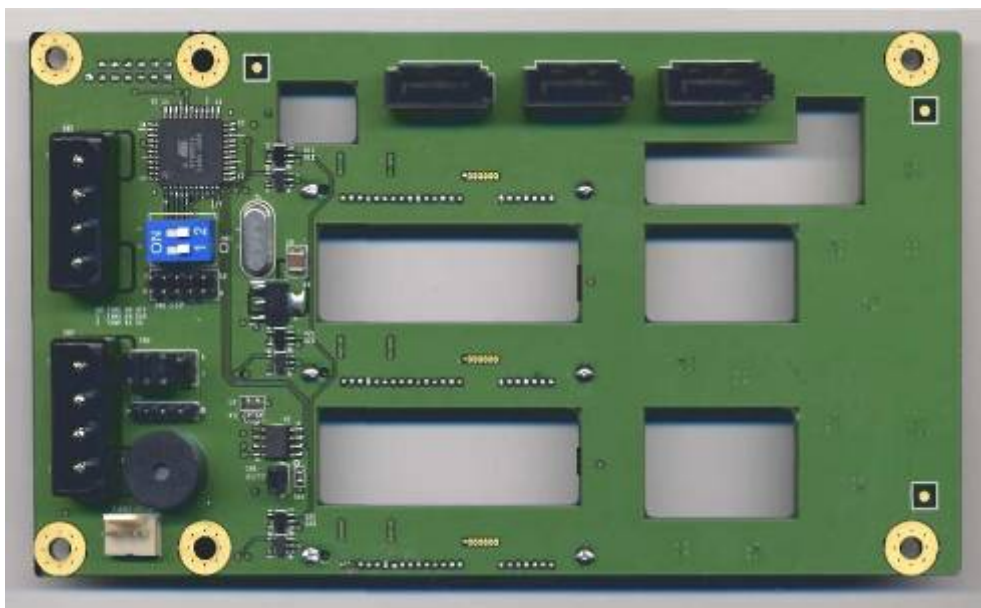
- a. Unplug fan connector and remove four screws on the cover



- b. Remove rear cover



- c. Backplane



Relative Part Number List

| CHENBRO Part Number | Description | Unit | Remark |
|------------------------|--|------|--------|
| 80H045323-001 | SK32303 LED Board | pcs | |
| 80H105323-003 | SK32303 3-Port SATA /SAS Backplane | pcs | |
| 26H123215-002 | SAS / SATA-II Cable, 700mm | pcs | |
| 26H113215-005 | HDD failure / activity signal Cable, 4P to 4P, 600mm | pcs | |
| 83H305223-001 | 60mm (Thickness 25mm), Ball Bearing Fan | pcs | |
| 83H555335-016 | Hot-swap HDD Tray | pcs | |